

§ 73.509

of the operation which control the external effects, must be at all times capable of providing satisfactory broadcast service. Studio equipment properly covered by an underwriter's certificate will be considered as satisfying safety requirements.

(Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303))

[28 FR 13651, Dec. 14, 1963. Redesignated at 42 FR 36828, July 18, 1977, and amended at 43 FR 53738, Nov. 17, 1978; 45 FR 28141, Apr. 28, 1980]

§ 73.509 Prohibited overlap.

(a) An application for a new or modified NCE-FM station other than a Class D (secondary) station will not be accepted if the proposed operation would involve overlap of signal strength contours with any other station licensed by the Commission and operating in the reserved band (Channels 200-220, inclusive) as set forth below:

Frequency separation	Contour of proposed station	Contour of other station
Co-channel	0.1mV/m (40 dBu) ...	1 mV/m (60 dBu).
	1 mV/m (60 dBu)	0.1 mV/m (40 dBu).
200 kHz	0.5 mV/m (54 dBu) ..	1 mV/m (60 dBu).
	1 mV/m (60 dBu)	0.5 mV/m (54 dBu).
400 kHz	10 mV/m (80 dBu) ...	1 mV/m (60 dBu).
	1 mV/m (60 dBu)	10 mV/m (80 dBu).
600 kHz	100 mV/m (100 dBu)	1 mV/m (60 dBu).
	1 mV/m (60 dBu)	100 mV/m (100 dBu).

(b) An application by a Class D (secondary) station, other than an application to change class, will not be accepted if the proposed operation would involve overlap of signal strength contours with any other station as set forth below:

Frequency separation	Contour of proposed station	Contour of any other station
Co-channel	0.1 mV/m (40 dBu) ..	1 mV/m (60 dBu).
200 kHz	0.5 mV/m (54 dBu) ..	1 mV/m (60 dBu).
400 kHz	10 mV/m (80 dBu) ...	1 mV/m (60 dBu).
600 kHz	100 mV/m (100 dBu)	1 mV/m (60 dBu).

(c) The following standards must be used to compute the distances to the pertinent contours:

(1) The distance of the 60 dBu (1 mV/m) contours are to be computed using Figure 1 of § 73.333 [F(50,50) curves] of this part.

(2) The distance to the other contours are to be computed using Figure

47 CFR Ch. I (10-1-98 Edition)

1a of § 73.333 [F(50,10) curves]. In the event that the distance to the contour is below 16 kilometers (approximately 10 miles), and therefore not covered by Figure 1a, curves in Figure 1 must be used.

(3) The effective radiated power (ERP) that is the maximum ERP for any elevation plane on any bearing will be used.

(d) An application for a change (other than a change in channel) in the facilities of a NCE-FM broadcast station will be accepted even though overlap of signal strength contours, as specified in paragraphs (a) and (b) of this section, would occur with another station in an area where such overlap does not already exist, if:

(1) The total area of overlap with that station would not be increased;

(2) The area of overlap with any other station would not increase;

(3) The area of overlap does not move significantly closer to the station receiving the overlap; and,

(4) No area of overlap would be created with any station with which the overlap does not now exist.

(e) The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water.

[50 FR 27962, July 9, 1985, as amended at 52 FR 43765, Nov. 16, 1987]

§ 73.510 Antenna systems.

(a) All noncommercial educational stations operating with more than 10 watts transmitter output power shall be subject to the provisions of § 73.316 concerning antenna systems contained in subpart B of this part.

(b) *Directional antenna.* No application for a construction permit of a new station, or change in channel, or change in an existing facility on the same channel will be accepted for filing if a directional antenna with a maximum-to-minimum ratio of more than 15 dB is proposed.

[42 FR 36829, July 18, 1977]

§ 73.511 Power and antenna height requirements.

(a) No new noncommercial educational station will be authorized with less power than minimum power